MAN Energy Solutions Expands German CHP-Plant

Additional MAN 35/44G TS engine in Schwäbisch Hall will significantly increase flexibility and efficiency; total plant efficiency to exceed 90%

MAN Energy Solutions has won the order to supply another MAN 12V35/44G TS gas engine to the public utilities (Stadtwerke) of the town of Schwäbisch Hall in southern Germany. The genset will increase the output of the existing combined-heat-and-power (CHP) plant to a total of 15 MW, and will replace an existing, outdated engine. The new engine will deliver an electrical efficiency of 46%, compared to 39% for the existing unit, thus significantly increasing the efficiency of the entire plant; the overall efficiency of CHP operation will eventually exceed 90%. The power plant on Alfred-Leikam-Street has produced electrical energy and heat for the local heating-network of the city since 1997.

MAN Energy Solutions previously delivered an engine of the same type to Stadtwerke Schwäbisch Hall in 2018. “The customer is very satisfied with the performance of the existing gas engine. Stadtwerke Schwäbisch Hall was particularly impressed by the plant's above-average electrical efficiency and flexibility, and are once again relying on our cogeneration solutions for this planned expansion,” said Dr. Tilman Tütken, Head of Sales, Power Plants Europe, at MAN Energy Solutions.

The new engine will be operated for around 4,000 hours a year using combined-heat-and-power technology. Due to the existing, district-heating storage, it will also be possible to decouple it from the heating network and to be used to generate electricity solely. “In this way, Stadtwerke Schwäbisch Hall will be able to make optimum use of the engine’s flexibility and respond to short-term price levels on the electricity market,” said Tütken.

CHP key technology for energy transition

“Renewable energies and CHP-concepts with district heating are economical and sustainable in the long term,” said Thomas Hoppenz, Head of Technical Division at Stadtwerke Schwäbisch Hall. “The numerous photovoltaic, wind-energy, biogas and hydropower plants in our supply area are ideally complemented by flexible CHP power plants. MAN Energy Solutions is a reliable and experienced partner and we are looking forward to our renewed cooperation.”

For MAN Energy Solutions, the order is a further success in the market for CHP plants. “Highly efficient technologies, such as CHP, make a central contribution to the controllability of power-generation in the context of the energy transition. Also in regard to the decision to phase coal out, gas-fired CHP plants will gain more importance in the future since they use resources more effectively, thanks to high overall efficiencies of over 90% and emitting less CO₂,” said Tütken.
MAN PrimeServ to take over engine maintenance

In addition to the engine and auxiliary systems, the scope of supply and services also includes an oxidation catalyst and the engineering of the heat-extraction system. MAN Energy Solutions will remain a partner in the project even after the planned commissioning in 2022 when the company’s global after-sales brand, MAN PrimeServ, will take over maintenance together with the staff of Stadtwerke Schwäbisch Hall.

Dr. Michael Filous, Vice President and Head of MAN PrimeServ O&M, said: “The long contract period of ten years proves the trust the customer has placed in us. We intend to repay this trust and look forward to working with them.”

MAN Energy Solutions is extending a CHP-plant in Schwäbisch Hall, Germany, with another gas engine of type MAN 12V35/44G TS (picture copyright: Stadtwerke Schwäbisch Hall/Stephan Baraniecki)
MAN Energy Solutions enables its customers to achieve sustainable value creation in the transition towards a carbon neutral future. Addressing tomorrow’s challenges within the marine, energy and industrial sectors, we improve efficiency and performance at a systemic level. Leading the way in advanced engineering for more than 250 years, we provide a unique portfolio of technologies. Headquartered in Germany, MAN Energy Solutions employs some 14,000 people at over 120 sites globally. Our after-sales brand, MAN PrimeServ, offers a vast network of service centres to our customers all over the world.